Abstract

A destination local area network (LAN) and a local LAN are coupled by an ATM-based wide area network (WAN). Each LAN includes a router. The WAN includes at least two ATM switches having switch ports. In order to identify and map a connection between the destination LAN and the local LAN, an end-to-end LAN-WAN-LAN connection components template is created. The template contains a number of fields which are populated during the course of identifying the connection. ~~ATM interfaces are identified on each router. The network addresses conform to Internet Protocol (IP) and are part of the same subnet. The IP address, IP subnet mask, city, state and the VPI/VCI ("virtual circuit identifier") value are retrieved from each of the ATM interfaces, and those values are stored to create a list describing the physical and logical characteristics of the ATM interface. A pair of network addresses is identified using the IP address in conjunction with the subnet mask stored for each ATM interface in the list. The virtual circuit identifier values associated with each of the network IP addresses are identified. WAN configuration data are retrieved and prepared so as to permit LAN to WAN correlation. The city, state and pair of virtual circuit identifier values of the ATM interfaces on the LANs are associated with the city, state and pair of virtual circuit identifier values on the WAN.~~ The connection is identified by using IP addresses, subnet masks and virtual circuit identifier values of ATM interfaces on the routers. Virtual circuit identifier values associated with pairs of IP addresses in the connection are identified, and associated with identifier values from the ATM interfaces on the routers. The associated configuration information and components of the WAN are retrieved and stored alongside entries in the list.